

Prairie du Pont NOFO Project Details Narrative

Complete the questions below – add lines as needed.

Section 1 – Applicant’s History with Watershed-Based Plan (WBP) Development and Best Management Practices (BMP) Implementation

Only organizations that have played a significant role in the successful development of an Illinois EPA-approved watershed-based plan AND have coordinated the implementation of best management practices or projects are eligible for the Prairie du Pont grant award.

Provide the following information for up to five (5) Illinois EPA approved watershed-based plans (WBP).

- Document Title
 - Author Organization/Date Completed
 - Description of applicant’s role and responsibilities in the development of a WBP
 - Link to WBP, if available
 - Status of WBP implementation and a description of applicant’s role and responsibilities in the implementation of the above WBPs.
1.
 - a. **Title:** Wood River Watershed Plan
 - b. **Organization/Author:** HeartLands Conservancy
 - c. **Date Completed:** December 1, 2020
 - d. **Description of Role:** HeartLands Conservancy, with the help of stakeholders including Madison, Macoupin, and Jersey Counties as well as the National Great River Research and Education Center and Midwest Streams, was the Illinois EPA 604(b) grant recipient for writing the watershed-based plan, water resource inventory, and all appendices including distributing and analyzing flood survey reports. The plan included modeling best management practices, a budget and schedule for BMP implementation to prevent nonpoint source pollution, and a list of specific project locations and solutions to those known problem areas. HeartLands Conservancy led open house, technical committee, and advisory committee meetings and led the public outreach for all watershed-related questions.
 - e. **Link:** The plan was recently completed; so, a link has not been created by the IEPA yet.
 - f. **Status of Implementation:** Implementation of the plan has yet to begin since the plan was recently completed.
 2.
 - a. **Title:** Piasa Creek Watershed Plan
 - b. **Organization/Author:** HeartLands Conservancy
 - c. **Date Completed:** December 1, 2020
 - d. **Description of Role:** HeartLands Conservancy, with the help of stakeholders including Madison, Macoupin, and Jersey Counties as well as the National Great River Research and Education Center and Midwest Streams, was the Illinois EPA 604(b) grant recipient for writing the watershed-based plan, water resource inventory, and all appendices including distributing and analyzing flood survey reports. The plan included modeling best management practices, a budget and schedule for BMP implementation to prevent nonpoint source pollution, and a list of specific project locations and solutions to those known problem areas. HeartLands Conservancy led open house, technical committee, and advisory committee meetings and led the public outreach for all watershed-related questions.

- e. **Link:** The plan was recently completed; so, a link has not been created by the IEPA yet.
 - f. **Status of Implementation:** Implementation of the plan has yet to begin since the plan was recently adopted.
- 3.
- a. **Title:** Canteen Creek - Cahokia Creek Watershed Plan
 - b. **Organization/Author:** HeartLands Conservancy
 - c. **Date Completed:** December 2018
 - d. **Description of Role:** Madison County contracted with HeartLands Conservancy to complete the watershed-based plan for Canteen Creek - Cahokia Creek Watershed. The process included coordinating with the US Army Corps of Engineers (USACE) to complete the water resource inventory, developing and distributing a flood survey for resident input, and organizing and leading technical and advisory committees. HeartLands was also responsible for planning open house events and community outreach, determining critical areas of need using various mapping tools, and developing an action plan for implementing the watershed plan's goals.
 - e. **Link:** https://www2.illinois.gov/epa/topics/water-quality/watershed-management/watershed-based-planning/Documents/Canteen%20Creek-Cahokia%20Creek%20Watershed%20Plan%20FINAL_.pdf
 - f. **Status of Implementation:** In December 2019, HeartLands Conservancy received an Illinois EPA 319 Grant to implement best management practices in the Canteen Creek-Cahokia Creek watershed. We are currently working on plans to restore eroded streambanks, restore wetland areas, and install permeable pavers to reduce nonpoint source pollution. This grant is ongoing and will be complete in 2022.
- 4.
- a. **Title:** Indian Creek - Cahokia Creek Watershed Plan
 - b. **Organization/Author:** HeartLands Conservancy
 - c. **Date Completed:** December 2018
 - d. **Description of Role:** Madison County contracted with HeartLands Conservancy to complete the watershed-based plan for the Indian Creek - Cahokia Creek Watershed. The process included coordinating with the US Army Corps of Engineers (USACE) to complete the water resource inventory, developing and distributing a flood survey for resident input, and organizing and leading technical and advisory committees. HeartLands was also responsible for planning open house events and community outreach, determining critical areas of need using various mapping tools, and developing an action plan for implementing the watershed plan's goals.
 - e. **Link:** https://www2.illinois.gov/epa/topics/water-quality/watershed-management/watershed-based-planning/Documents/Indian%20Creek-Cahokia%20Creek%20Watershed%20Plan%20FINAL_.pdf
 - f. **Status of Implementation:** In July 2020, HeartLands Conservancy applied for the Illinois EPA 319 Grant to install best management practices in the watershed. This application included funding to potentially install practices to prevent sediment from reaching Dunlap Lake, a critical lake for controlling stormwater runoff in the City of Edwardsville.
- 5.
- a. **Title:** Lower Silver Creek Watershed Plan
 - b. **Organization/Author:** HeartLands Conservancy
 - c. **Date Completed:** September 2018
 - d. **Description of Role:** HeartLands Conservancy received an Illinois EPA 604(b) Grant to complete the Lower Silver Creek Watershed Plan. HeartLands Conservancy, along with

the National Great River Research and Education Center (NGRREC) and Midwest Streams, developed nutrient loading in the watershed, target goals and objectives for reducing nonpoint source pollutants, and possible best management practices for implementation to improve the health of the watershed. This watershed required coordination with Scott Air Force Base, which has experienced several significant flooding events. Communication with the Base and other residents in the watershed was vital in completing a successful watershed plan.

- e. **Link:** <https://www2.illinois.gov/epa/topics/water-quality/watershed-management/watershed-based-planning/Documents/Lower%20Silver%20Creek%20Watershed%20Plan.pdf>
- f. **Status of Implementation:** In January 2020, HeartLands Conservancy and Scott Air Force Base secured a \$500,000 Readiness and Environmental Protection Integration (REPI) grant from the US Department of Defense to conserve land in the watershed's floodplains or in areas where stormwater retention/detention would be beneficial to the watershed. This funding is available through 2025, with the ability to renew at the end of the funding cycle.

Provide the following information for up to eight (8) best management practices (BMP) or projects for which the applicant coordinated implementation of the project.

- Project Name
- Property Owner
- Project Installation Date
- Type of BMPs and number of units (acres, linear feet, etc.) installed
- Describe the role and responsibilities for the implementation of the BMPs or project

1.

- a. **Project Name:** Highland Silver Lake BMP Implementation - 319 Grant
- b. **Property Owner:** Rutz Trust
- c. **Project Installation Date:** July 1, 2020
- d. **Type of BMPs Installed:**
 - i. Water and Sediment Control Basins - 5,926 feet
 - ii. Water Diversion - 1,000 feet
 - iii. Grassed waterway - 0.1 acres
 - iv. Grade stabilization structure - 1 structure
 - v. Streambank and channel stabilization - 80 feet
- e. **Role and Responsibilities:** HeartLands Conservancy was responsible for design specifications for the construction of best management practices, technical service for design and installation of the BMPs, procurement of all necessary permits for construction, development of a 10-year operation and maintenance plan, and managing the funding for reimbursement to the landowner for implementing the BMPs.

2.

- a. **Project Name:** Highland Silver Lake BMP Implementation - 319 Grant
- b. **Property Owner:** City of Highland
- c. **Project Installation Date:** July 1, 2020
- d. **Type of BMPs Installed:**
 - i. Shoreline Stabilization - 2,035 feet of riprap

- e. **Role and Responsibilities:** HeartLands Conservancy was responsible for design specifications for the construction of best management practices, technical service for design and installation of the BMPs, procurement of all necessary permits for construction, development of a 10-year operation and maintenance plan, and managing the funding for reimbursement to the landowner for implementing the BMPs.
- 3.
- a. **Project Name:** Upper Silver Creek BMP Implementation - 319 Grant
 - b. **Property Owner:** Village of Hamel
 - c. **Project Installation Date:** May 16, 2018
 - d. **Type of BMPs Installed:**
 - i. Stream channel stabilization - 700 feet
 - ii. Streambank stabilization - 320 feet
 - e. **Role and Responsibilities:** HeartLands Conservancy was responsible for design specifications for the construction of best management practices, technical service for design and installation of the BMPs, procurement of all necessary permits for construction, development of a 10-year operation and maintenance plan, and managing the funding for reimbursement to the landowner for implementing the BMPs.
- 4.
- a. **Project Name:** Upper Silver Creek BMP Implementation - 319 Grant
 - b. **Property Owner:** Freeman Schmidt
 - c. **Project Installation Date:** May 1, 2018
 - d. **Type of BMPs Installed:**
 - i. Grassed Waterway - 2.2 acres
 - ii. Grade stabilization structure - 3 structures
 - e. **Role and Responsibilities:** HeartLands Conservancy was responsible for design specifications for the construction of best management practices, technical service for design and installation of the BMPs, procurement of all necessary permits for construction, development of a 10-year operation and maintenance plan, and managing the funding for reimbursement to the landowner for implementing the BMPs.
- 5.
- a. **Project Name:** Upper Silver Creek BMP Implementation - 319 Grant
 - b. **Property Owner:** Scott Myers
 - c. **Project Installation Date:** September 17, 2018
 - d. **Type of BMPs Installed:**
 - i. Streambank Stabilization - 7,000 feet of stream stabilized using riffles.
 - e. **Role and Responsibilities:** HeartLands Conservancy was responsible for design specifications for the construction of best management practices, technical service for design and installation of the BMPs, procurement of all necessary permits for construction, development of a 10-year operation and maintenance plan, and managing the funding for reimbursement to the landowner for implementing the BMPs.
- 6.
- a. **Project Name:** Highland Silver Lake BMP Implementation - 319 Grant
 - b. **Property Owner:** City of Highland
 - c. **Project Installation Date:** November 11, 2020

- d. **Type of BMPs Installed:**
 - i. Wetland Restoration - 1 acre
 - e. **Role and Responsibilities:** HeartLands Conservancy was responsible for design specifications for the construction of best management practices, technical service for design and installation of the BMPs, procurement of all necessary permits for construction, development of a 10-year operation and maintenance plan, and managing the funding for reimbursement to the landowner for implementing the BMPs.
- 7.
 - a. **Project Name:** Highland Silver Lake BMP Implementation - 319 Grant
 - b. **Property Owner:** Village of Grantfork
 - c. **Project Installation Date:** May 21, 2020
 - d. **Type of BMPs Installed:**
 - i. Water and sediment control basins - 858 feet
 - ii. Grassed waterways - 0.8 acres
 - iii. Conservation cover crops - 15 acres
 - e. **Role and Responsibilities:** HeartLands Conservancy was responsible for design specifications for the construction of best management practices, technical service for design and installation of the BMPs, procurement of all necessary permits for construction, development of a 10-year operation and maintenance plan, and managing the funding for reimbursement to the landowner for implementing the BMPs.
- 8.
 - a. **Project Name:** American Bottom Wetland Interpretive Site & Education Campaign - 319 Grant
 - b. **Property Owner:** Madison County, Collinsville Area Recreation District
 - c. **Project Installation Date:** October 2013
 - d. **Type of BMPs Installed:**
 - i. Reconstructed Wetland - 1 acre
 - ii. Wet Prairie Plantings - 19.5 acres
 - iii. Permeable Paver Parking Lot - 0.31 acres
 - iv. Floating Boardwalk - 464 feet
 - v. Interpretive Signs - 9 signs
 - vi. Nature Trail - 470 feet
 - e. **Role and Responsibilities:** HeartLands Conservancy was responsible for contracting with an engineering firm for design specifications for the construction of best management practices, technical service for design and installation of the BMPs, procurement of all necessary permits for construction and development of a 10-year operation and maintenance plan. HLC was also responsible for designing and installing the interpretive signs and managing the funding for reimbursement to the landowner for implementing the BMPs.
- 9.
 - a. **Project Name:** Low Impact Development Techniques in Madison County - 319 Grant
 - b. **Property Owner:** Rock Hill Trails Subdivision, Wellspring Development Company
 - c. **Project Installation Date:** December 2009
 - d. **Type of BMPs Installed:**
 - i. Constructed Wetland - 52,600 square feet
 - ii. Filter Strips - 1,700 square feet

- iii. Vegetated swales - 8,800 square feet
 - iv. Bioretention Cell - 18,850 square feet
 - v. Rain gardens - 7,000 square feet
 - vi. Pervious pavement - 2,090 square feet
 - vii. Recessed Street Islands - 3,060 square feet
 - viii. Wet Meadows - 36,200 square feet
 - ix. Rain Barrels & Cisterns - 1, 2000 gallons
 - x. Bioengineered Streambank Stabilization - 1,647 linear feet
 - e. **Role and Responsibilities:** HeartLands Conservancy was responsible for contracting with a development company to install best management practices in a new subdivision. The practices were intended as demonstration projects for other developers to implement in future subdivisions. HLC also created an education and outreach program, which included creating a handbook for low impact development and leading BMP tours to show the practices to developers and communities. HLC was also responsible for managing the funding for reimbursement to the landowner for implementing the BMPs.
- 10.
- a. **Project Name:** Cahokia Creek Restoration at Roxana Landfill - 319 Grant
 - b. **Property Owner:** Roxana Landfill
 - c. **Project Installation Date:** May 2015
 - d. **Type of BMPs Installed:**
 - i. Stabilize meander - 1920 feet
 - ii. Streambank stabilization - reducing slope to 1.5:1 - 1920 feet
 - iii. Streambank stabilization - stone toe protection - 3,390 feet
 - iv. Rock riffle grade control and fish passage - 2 structures
 - v. Riparian Corridor Establishment - 11.4 acres
 - e. **Role and Responsibilities:** HeartLands Conservancy was responsible for contracting with an engineering firm for design specifications for the construction of best management practices, technical service for design and installation of the BMPs, procurement of all necessary permits for construction and development of a 10-year operation and maintenance plan. HLC was also responsible for designing and installing the interpretive signs and managing the funding for reimbursement to the landowner for implementing the BMPs.

Section 2 – Watershed-based Planning (Maximum – 24 months)

2.1 What are the steps/tasks needed to develop the Prairie du Pont WBP? Provide specific details, milestones, and timeline

Task 1 - Community Outreach

The Prairie du Pont/Judy's Branch watersheds contain all or part of the communities of Centreville, Alorton, Cahokia (these three communities are in the process of merging to form Cahokia Heights), East St. Louis, Dupo, East Carondelet, Belleville, Fairview Heights, Millstadt, Caseyville, Washington Park, Sauget, Fairmont City, Brooklyn, and Columbia. To ensure residents and communities have a strong voice in the plan, HeartLands Conservancy will recruit leaders from each community to 1) serve on a Watershed Planning Committee (WPC) that guides the details of the plan and 2) to help inform and gather feedback from the residents of the

watershed about the plan and demonstration projects. These leaders will receive instructions, information, and materials/outreach tools to gather resident input and ensure problem areas and opportunities are addressed in the plan. The community leaders will serve as one conduit between the project team and watershed residents to increase communication and information sharing throughout the watershed. These community leaders will be identified within the first month of the project and frequently contacted and consulted throughout the project. Community Leaders will be paid a stipend to compensate them for their labor on community outreach.

The next step of the watershed plan development is creating a Watershed Planning Committee (WPC) and a Technical Committee (TC). The committees will be formed in the first month of the project, and meetings will be held at a minimum of each quarter. The Watershed Planning Committee will consist of the community leaders (mentioned above), other people from each municipality, local active citizen groups, and organizations within the watershed (e.g., Centreville Citizens for Change, Urban League, social service groups, etc.). To serve on the committee, prospective members must know about or experience the stormwater, flooding, and erosion issues in their community, the significant problems, and ideally have been selected as representatives of their community or organization. The WPC will guide the vision, goals, and strategies in the plan. The project team will facilitate this group and present information and drafts for review throughout the planning process. This committee will also guide outreach and information messaging, audiences, and materials to inform watershed residents and have input into the plan.

The Technical Committee will be composed of individuals with expertise in stormwater management, water quality, stream and soil health, wastewater systems, housing, conservation, civil engineering, stormwater policy/laws/programs, emergency management, and urban planning. The committee members should include expert representatives from local government (e.g., public works departments or associated engineering firms), sewer/water district representatives, university/academic researchers, state and federal agencies, health departments, and environmental organizations (e.g., soil and water district). They will help guide the formulation of the water resource inventory and review stream assessment analysis, pollutant load results, nutrient and flooding reduction targets, milestones for the watershed plan implementation, demonstration BMP suitability, and other plan components.

Next, the project team will conduct individual meetings with townships, sewer and water districts/providers, municipalities, local citizen groups, county board members, and other interested groups. These smaller group meetings will allow attendees to share the locations of problems and specific details related to stormwater, flooding, wastewater backup/infiltration, and erosion, and give detailed input on stormwater issues, including failed stormwater infrastructure in the watershed. Some meetings may be held on-site of identified problem areas. Members of the Watershed Planning and Technical Committees will be presented with the areas of concern, and all members will then be able to discuss solutions to the issues. Individual group meetings will begin in the first quarter of the project and continue throughout the project's length, with as many site visits completed as possible in the first two quarters. The project team will also "table" at other organizations' events in the watershed to reach more people.

Open Houses will be available to the general public and provide residents with another way to voice concerns and ask questions to the Technical and Watershed Planning Committees as

project liaisons. Two Open Houses will be scheduled during the project. The first will occur in the first two quarters to discuss the planning process and expectations, provide education on watersheds and how they work, get initial community input, and share information to date. The second will be held in the last two quarters of the process to explain BMP pilot projects, present draft recommendations, share survey and virtual results, answer questions, and get feedback.

Other community engagement activities are discussed in section 2.3.

Task 2 - Watershed Resource Inventory (WRI)

Although all project team members are local and familiar with the project area, the project team will start the process by visiting/touring the project area, review existing documents and studies, and noting any initial observations about infrastructure, stream health, drainage, and other considerations.

HLC, along with the National Great Rivers Research and Education Center (NGRREC) and Southern Illinois University Edwardsville (SIUE), will develop a comprehensive watershed resource inventory (WRI). The WRI is an inventory of physical water resources and an assessment of water resource threats. HLC will organize the data for the following sections: watershed boundaries, climate, geology, soils, watershed jurisdictions, demographics, land use/land cover, watershed drainage, habitat and biological health, existing wastewater and stormwater infrastructure condition and service area/capacity, subwatersheds, flooding, and water quality.

The water quality issues, including pollutant loads in streams and lakes and causes and sources of these pollutants, will be assessed by NGRREC. NGRREC will use modeling tools, including the Spreadsheet Tool for Estimating Pollutant Loads (STEPL), to calculate estimates of pollutant loads of nitrogen, phosphorus, and sediment by subwatershed. They will also use water quality monitoring data from USGS (STORET) gages and other available sources to determine existing water quality in streams and lakes.

The SIUE Civil Engineering department will develop watershed hydrology and water quality models using the Soil and Water Assessment Tool (SWAT). This model will simulate water quality parameters, including dissolved oxygen concentrations in lakes and streams. The model will also determine surface runoff and evapotranspiration and simulate hydrological processes in the watershed. SIUE will also create a one-dimensional-hydraulic model to determine water surface elevation, water depth, velocity, and inundation patterns for rivers and floodplains using the HEC-RAS1D software. These models will help determine flooding locations under known precipitation conditions and can be used to analyze floodplain and riparian habitat and change in water quality due to change in human activities.

The results of a mobile mapping platform, created by HLC with data input by watershed residents, will be included in the flooding, drainage, and water quality sections. This data will be combined with other resident floodwater data collection and tracking, including water depth measurement sticks/gauges, to measure the amount of floodwater present during precipitation events and various times throughout the year. The models created by SIUE and real-time data

from residents will provide the most accurate analysis of how water flows through the watershed during precipitation events.

HLC will also perform satellite assessment of stream conditions to create data on streambank erosion, riparian condition, and channelization in larger streams in the watershed. HLC staff will conduct field surveys of smaller streams with local volunteers' assistance to gain a more detailed characterization of the streams throughout the watershed.

Work on the water resource inventory will begin during the first quarter of the project, and a draft will be completed at the end of the first quarter in the second year. The WPC and TC will review the draft and provide feedback. The final WRI will be completed by the end of the second quarter of the second year. The milestones for completing the water resource inventory will be the completion of pollutant load estimates by NGRREC, analysis of stream conditions by HLC, modeling of flooding and pollutant loads by SIUE, and the inclusion of resident data with the mobile mapping tool.

Task 3 - Community Flood Survey

In addition to the mobile mapping tool, a community flood survey will be provided to groups, local governments, the WPC, and randomly selected addresses in the watershed. The survey will also be available using the internet or a mobile device. The survey will consist of various flooding-related questions, including frequency of flooding, causes of flooding, the extent and costs of flood damage, flood insurance coverage, and personal values about water quality. The questions will be created to maximize survey response using powerful purpose, simple to return, and privacy assurance. The community flood survey data will help determine how to allocate resources best to address flooding problems. Writing and distributing the community flood survey will begin in the second quarter of the first year, and responses will be collected and analyzed during the first quarter of the second year.

Task 4 - Draft Watershed-Based Plan (WBP)

Using the data collected from the two previous tasks, HeartLands Conservancy will complete a draft watershed-based plan (Plan). The Plan will be consistent with the USEPA watershed-based plan guidelines, total maximum daily load (TMDL) implementation plan requirements, and current watershed planning principles. The guiding principles for the Plan will be the nine essential elements for completing a watershed plan, as set by the USEPA, which includes:

- 1) Identification of the causes/sources of pollution that need to be controlled to achieve the pollutant load reductions estimated in the watershed plan;
- 2) Estimate pollutant load reductions expected following the implementation of the management measures under element three below;
- 3) Description of the BMPs (non-point source management measures) that are expected to be implemented to achieve the load reductions estimated under element two above and an identification of the critical areas in which those measures will be needed to implement;
- 4) Estimate of the amounts of technical and financial assistance needed, associated costs, and/or the source and authorities that will be relied upon to implement the plan;
- 5) Public information/education component that will be implemented to enhance public understanding of the project and encourage early and continued participation in selecting, designing, and implementing/maintaining non-point source management measures that will be implemented;

- 6) Schedule for implementing the activities and non-point source management measures identified in this plan that is reasonably expeditious;
- 7) Description of interim, measurable milestones for determining whether non-point source management measures or other control actions are being implemented;
- 8) Set of environmental or administrative criteria that can be used to determine whether loading reductions are being achieved over time and substantial progress is being made towards attaining water quality standards;
- 9) Monitoring component to evaluate the effectiveness of the implementation efforts over time.

The watershed plan will be composed of seven sections: Introduction; Goals, Objectives, and Targets; Issues and Critical Areas; Overview of Management Measures; Management Measures Action Plan; Information and Education Plan, and Implementation. There will also be appendices, including the water resource inventory, critical area maps, expanded management measures, monitoring plan, funding sources, and progress report cards.

The Goals, Objectives, and Targets section will detail the long-term goals and objectives developed by the watershed planning and technical committees using the water resource inventory and resident input to address the challenges and issues associated with achieving a healthy, functioning watershed. Each goal and objective align with an issue to be addressed, recommended BMPs, and organizations implementing those BMPs. This section also establishes reduction targets that will be used to determine the suite of recommended management measures.

The Issues and Critical Areas section describes all of the known issues in the watershed, such as drinking water source protection, sewer contamination, prevalent flooding, and undersized stormwater infrastructure. It also includes the Critical Areas, which are locations in the watershed where existing or potential future causes and sources of pollutants or issues are significantly worse than other areas. Critical Areas are identified using SIUE's models, assessments of streams and riparian areas, Agricultural Conservation Planning Framework (ACPF) and EPA SUSTAIN/BMP Siting Tool models completed by HLC, stakeholder input from the various outreach tools described previously, and stormwater infrastructure issues identified by sewer districts, volunteer reporting, and local governments. Management measures will address these areas first.

The Overview of Management Measures section describes acceptable practices that could be used to protect water quality and control stormwater. There are two types of management measures typically addressed in the Plan. Programmatic measures are watershed-wide preventative and policy efforts that can be applied by various stakeholders. Site-specific measures can be implemented at specific locations to improve flooding and water quality and are typically categorized as urban, forest, stream and lake, and agricultural.

The Management Measures Action Plan details the best management practices recommended to meet the watershed plan's goals, targets, and objectives. These measures are selected based on performance, cost, public acceptance, and ease of construction and maintenance. This section also outlines specific site-specific management measures based on the Critical Areas previously developed, stormwater infrastructure issues located by volunteer reporting, sewer

districts, and municipalities, and areas recommended by the ACPF and EPA SUSTAIN/BMP Siting Tools models. The final portion of this section includes ten to twelve specific project locations identified by the WPC. These projects will provide a jumping-off point for plan implementation for local, state, and federal governments. The sites will be determined using locations of issues identified by stakeholders, Critical Areas, and BMPs mapped by ACPF and EPA SUSTAIN/BMP Siting Tool models.

The next section of the Plan is the Information & Education Plan which is designed to spark interest in and enhance public understanding of the watershed plan and encourage early and continued participation in selecting, designing, and implementing its recommendations. Questions, such as ‘who can affect these issues?’ and ‘what do people need to know before they can take action?’ are considered in this component’s development. Activities and tools will be tabulated to show the specific programs that should be implemented.

The final section of the plan is Implementation, which includes recommended short term (one to 10 years), medium-term (10 to 20 years), long term (20+ years), and ongoing (for maintenance activities) timelines for implementation. The Implementation section also includes possible funding sources for the various Management Measures, monitoring timeline, completed by NGRREC, analyzing the success of the BMPs implemented, and measuring the Plan’s success.

The writing of the Draft Plan will begin during the first month of the project. It will be submitted to the Illinois EPA, watershed planning and technical committees, and the watershed stakeholders for review during the third quarter of the second project year. Milestones for the draft plan will include the identification of issues, goals, and objectives to restore the health of the watershed, the completion of the ACPF and EPA SUSTAIN/BMP Siting Tool models, the creation of the suite of BMPs that meet the goals, objectives and targets, and the completion of the monitoring, information and outreach, and implementation and milestone plans.

Task 5 - Final Watershed-Based Plan (WBP)

After the IEPA, WPC, TC, and public complete their review of the Draft Watershed-Based Plan, the project team will incorporate comments into the Final Watershed-Based Plan. The WPC and TC will review final edits to ensure accuracy. The Final Plan will then be submitted to the IEPA for acceptance into the state watershed management program. The Final Plan will be distributed to watershed communities, the county, and other participants. The Final Plan will be completed in the fourth quarter of the second year of the project.

2.2 Who will be involved in the WBP development and what are their role(s) and responsibilities?

HeartLands Conservancy

HeartLands Conservancy will be the lead organization for the creation of the WBP. The organization will be responsible for creating and implementing the community and outreach program, gathering and analyzing data, creating maps, and writing the water resource inventory and watershed-based plan. HLC will schedule meetings, open house events, and site visits and be the primary contact for any project questions.

Southern Illinois University Edwardsville (SIUE) – Dr. Rohan Benjankar Team

Dr. Rohan Benjankar will lead the SIUE team, including the SIUE Civil Engineering Department and graduate assistants. Dr. Benjankar's team will be responsible for completing and interpreting the watershed hydrological and water quality models using the Soil and Water Assessment Tool and the 1D-hydraulic model using the HEC-RAS1D software. Dr. Benjankar will also be a member of the technical committee and be involved with the community outreach program by presenting their findings to local stakeholders.

National Great Rivers Research and Education Center (NGRREC) - Dr. John Sloan Group

Dr. John Sloan will lead the NGRREC team, which includes watershed scientists and environmental technicians. Dr. Sloan's team will be responsible for completing and interpreting the pollutant load analysis using the Spreadsheet Tool for Estimating Pollutant Loads (STEPL) and analyzing water quality data from all available sources. They will also be responsible for completing the watershed monitoring program. Dr. Sloan will be a member of the technical committee and be involved with the community outreach program by presenting their findings to local stakeholders.

Community Leaders

The Community Leaders will be selected by the residents and organizations they serve to act as a line of communication between the community and all WPC members and TC members. The Community Leaders will serve on the WPC and present the stormwater issues present in their communities. They will participate in the Open House events and site visits and promote volunteer opportunities to ensure community feedback is included in the watershed plan.

2.3 How will the local community/citizens be engaged in the development of the WBP?

Digital Participation

To ensure that participation is available anytime (and especially due to COVID restraints), self-guided interactive participation opportunities will be developed. This will include a mobile-friendly mapping platform for participants to share areas of flooding, erosion, and stormwater issues. The color-coded data may also be used to guide pilot best management practices. Other resources will include videos on YouTube, website information, online surveys, and email distribution lists.

Both committees will be asked to share information, posters, links, and invitations with their community connections to encourage participation. The project team will also ensure to post flyers for all outreach events and virtual links at key places within the community, whether physical or virtual - the library, churches/church bulletins, Facebook groups, local publications, YMCAs, community centers, utility bills, municipal websites, food centers, informal gathering places (physical or virtual), etc.

If the current COVID pandemic is still ongoing throughout the watershed plan, virtual meetings using zoom or other mobile-friendly technology will be held to gather information from the public. HLC is capable of hosting virtual conferences with the ability for attendees to provide real-time input through breakout groups. These virtual conferences will also be recorded and posted to HLC's website and YouTube channel and shared with members of the committees to post on their media platforms. The information provided to the residents will be formatted to be mobile phone friendly to allow residents with limited internet access to provide input.

Community Leaders

To ensure the watershed plan can be started and completed successfully, leaders from each community will be recruited to 1) serve on a Watershed Planning Committee (WPC) that guides the details of the plan 2) to help inform and gather feedback from the residents of the watershed about the plan and demonstration projects 3) to strengthen lines of communication and transparency throughout the entire process. These leaders will receive instructions, information, and materials/outreach tools to gather resident input to ensure all problem areas are addressed in the plan. The community leaders will serve as one conduit between the project team and watershed residents to increase communication and information sharing throughout the watershed.

Open House Events

Open Houses will be available to the general public and provide residents with another way to voice concerns and ask questions to the Technical and Watershed Planning Committees. Open houses are described in Section 2.1.

Stakeholder Meetings/Site Visits/BMP Tours

In addition to Open House events, meetings will be held with municipalities, local citizen groups, and concerned residents throughout the watershed planning process. These smaller meetings will occur as site visits to problem areas, tours of installed BMPs or pilot projects under construction, and zoom calls. The outdoor and virtual meetings will be critically important during the current social distance guidelines.

Volunteer Opportunities

HeartLands Conservancy is going to develop and promote various volunteer opportunities to gather data from the community. These opportunities include volunteer reporting of issues through mobile mapping software, monitoring problem areas, and recording water depths after precipitation events. The mobile mapping software will allow residents to input known problem areas such as flooding and erosion to a community shared map using their mobile devices. The monitoring and recording of water depths will help improve the accuracy of the models created by SIUE.

Virtual Learning

Webinars, training videos, and site visits will be recorded and posted to a designated watershed planning web page created by HLC. These videos will help describe the watershed planning process, explain the importance of a watershed plan, allow an increased audience to view open house meetings, and teach residents how to collect, record, and report valuable information.

Further information is provided under section 2.1 and in Section 3.

2.4 What is the most important component(s) of a WBP and why is it needed to make the WBP implementable? (Optional Question)

The most important part of the Watershed-Based Plan is meaningful community engagement. Modeling and data analysis are essential, but it is meaningless without on-the-ground input and understanding of the issues contributing to flooding and water pollution.

When residents and officials are armed with the knowledge of what contributes to watershed issues, what types of problems to look for, how and where to report them, how to prevent or mitigate problems on their property when possible, and how to work together to solve problems, the goals of the watershed plan are more likely to be implemented.

Section 3 – Outreach and Information Program

3.1 In detail, describe the outreach and information program that will be developed and implemented. Include specific tasks, milestones, and timeline(s).

Task 1 - Form Watershed Planning Committee and Recruit Community Leaders

Leaders from each community in the watershed will be recruited to 1) serve on a Watershed Planning Committee that guides the plan and 2) to help inform and gather feedback from their community about the plan and demonstration projects. These leaders will receive instructions, information, and materials/outreach tools to gather resident input to ensure all problem areas are addressed in the plan. The community leaders will serve as one conduit between the project team and watershed residents to increase communication and information sharing throughout the watershed. The project team will identify the community leaders within the first month of the project and will be in frequent contact.

Task 2 - Develop Watershed Materials

A suite of informational materials will be developed, such as a website, social media content, brochure, posters or displays, to provide information about watersheds in general, what a watershed plan is, explain the process, and contact information. These materials can be distributed at meetings, social media/websites, various places in the project area, and to the community leaders/committees. An email list will also be created to allow for monthly distribution of plan updates to stakeholders and residents. This information will be translated into Spanish to ensure the large Hispanic/Latino community in the watershed has access to the material. These materials will be developed within the first quarter of the project and updated as needed throughout the process.

Task 3 - Crowd-sourced digital mapping

To further gather information from residents, a mobile mapping platform will be created to allow residents to share areas of flooding, erosion, and stormwater issues into a map that can be shared with all community members. The color-coded data may also be used to guide siting of pilot best management practices. Data from the flood survey (mentioned in Section 2.1) can be included in this map as well.

Task 4 - Small Group Meetings and Visits with Groups and Governments

The project team will meet with townships, sewer and water districts/providers, municipalities/county, resident groups, and other interested groups. These smaller group meetings will allow attendees to share the locations of problems related to stormwater, flooding, wastewater backup/infiltration, and erosion, and give detailed input on stormwater issues, including failed stormwater infrastructure, in the watershed. These meetings may be held on the site of problem areas in the watershed. Meetings will begin in the first quarter of the project and continue throughout the project's length, with as many site visits completed as possible in the first two quarters.

Task 5 - Open Houses/Workshops (In-Person and/or Virtual due to COVID)

Open houses are discussed in section 2.1.

If the current COVID pandemic is still ongoing, virtual meetings using zoom or other mobile-friendly technology will be held to gather information from the public. Virtual sessions will also be recorded and posted to the project website and YouTube and shared with members of the committees to post on their media platforms. The information provided to the residents will be formatted to be mobile phone friendly to allow residents with limited internet access to provide input.

Task 6 - Stakeholder flood data collection and tracking

Water depth measuring sticks will be provided to the Watershed Planning Committee members and other residents and organizations/municipalities in the watershed within the first quarter of the project. The WPC will determine where the water depth measuring sticks will be installed and promote volunteer monitoring before, during, and after precipitation events. HeartLands Conservancy will hold a brief training on the use of the sticks (virtual or in-person), which will help collect flooding data in the community. Participants will be able to record water depth data in one of two ways:

1. Using a QR code on the stick from a mobile device. The code will go to a website (using ArcGIS Online Survey123) where the user can use their phone to easily/automatically geolocate, enter water depth measurements, and other requested observations. The results will automatically feed into an online map that anyone can view. The data will also be available to use in GIS mapping and for comparison to watershed modeling.
2. For participants not comfortable with or unable to enter information using the method above, paper forms will be available and collected by the project team at WPC meetings. HLC will input hard copy data into the mapping system.

Task 7 - BMP Pilot Project Tour and Training Workshops

After the pilot demonstration projects are completed, a tour will be held to explain the project's purpose and other details. The project team will host a training session with the responsible parties and residents on maintenance and monitoring of the BMPs and how to report their functionality. Other workshops can be held during the process on important topics that arise during community outreach. Examples could include landscape options to reduce basement infiltration, municipal stormwater management responsibilities and options, etc. Partnerships with organizations and groups in the watershed will be essential for conducting successful training workshops.

3.2 Identify the target audience(s), general message(s) by audience(s), and delivery tools to reach each audience(s).

- **Audience: local government officials and staff**
 - General messages: Information about the process, nonpoint source pollution, funding purpose, outcomes, responsibility as a unit of government, roles in the broader watershed
 - Delivery tools: In-person meetings with maps and brochures, participation in committee meetings and other meetings, website, regular email, and phone updates depending on each community's preference.
- **Audience: residents of the watershed**

- General messages: What is a watershed, where does the water flow (where does it come from and where does it go), issue identification information, who is responsible for which aspect of stormwater and wastewater infrastructure, and asking residents to provide locations of problem areas and descriptions about the length of time of problems and other conditions. Also, it will be important to regularly share the progress of the watershed plan and implementation projects, how decisions were made, and anticipated timelines and results. Translation of materials into Spanish will be required in this area and translators should be available at WPC meetings and open houses.
- Delivery tools: Site visits, digital and paper maps, brochures, presentations and discussions at their group meetings, information kiosks/flyers at community events or frequently visited locations, interactive exhibits, social media, mobile devices, website, articles in local magazines or newspapers/newsletters.
- **Audience: federal and state agencies**
 - General messages: Updates on plan and project progress, key issues, community feedback messages, barriers encountered to implementation, and suggested solutions
 - Delivery tools: Conference call check-ins, Technical Committee participation, written meeting summaries and input summaries, mapping, reporting, emails, website
- **Audience: other organizations that serve the community**
 - Examples of community organizations include but are not limited to St. Clair County Health Department, East Side Aligned, United Congregations of Metro East, Sierra Club, Urban League, local active citizen groups)
 - General messages: Stewardship building, water depth gauge monitoring, promoting volunteer efforts, issue identification, how to report, explanation of watershed, hydrology graphics, where does your come from and where does it go, who to contact if you have problems, different languages
 - Delivery tools: Presentations and discussions at organizations' meetings, articles in magazines and newspapers, and organization newsletters/email.

3.3 Who will be involved in the development and implementation of the outreach and information program? What are their role(s) and responsibility(s)

Community leaders (as identified in section 2.1) and others on the Watershed Planning Committee and Technical Committee will guide the Outreach and Information Program. The community leaders will be asked to share and gather information from their respective communities and report back to the committee and project team. The community leaders may also connect project team members with resident groups, organizations, residents/businesses, and others in the watershed for more detailed discussions, presentations, site visits, or other needs. HeartLands Conservancy will ultimately develop and finalize the outreach and information program based on the above input.

3.4 What is the most important outreach/education component(s) and why is it needed in order to make the outreach and information program a success? (Optional Question)

Trust and transparency in the process and the participants is the most essential component of the outreach and information program. All parties must feel that their concerns and goals are being heard, addressed to the greatest extent possible, and treated fairly and apolitically. Communication must be clear, honest, understandable, and frequent. Beyond transparency, helping residents and communities understand the technical details of the watershed plan and implementation and being upfront with the limitations of watershed planning and BMP implementation, is critical to a transparent and straightforward process and the success of future implementation.

3.5 What part(s) of the proposed outreach and information program may be impacted by COVID-19 and 'social distancing'? What is 'Plan B' to ensure those components are successfully delivered within the project period?

All of the proposed meetings and engagement opportunities can be accomplished virtually using virtual conferencing tools, such as zoom, conference calls, digital mapping tools, and mobile devices. Also, in-person meetings can have staggered meeting times to limit group sizes, face-covering requirements, and distancing requirements.

HeartLands Conservancy has been able to complete watershed plans and BMP implementation during the 2020 stay-at-home orders and other State-mandated restrictions. HLC has successfully worked virtually to complete both the Wood River and Piasa Creek watershed plans during the pandemic using these tools and techniques.

Section 4 – Best Management Practices (BMP) Implementation Process (Max. 12 Months)

4.1 What are the steps/tasks needed to coordinate the implementation of the demonstrative best management practices (BMP) throughout the project area? Include specific tasks, milestones, and timeline(s).

Identifying Potential Sites and BMPs

To ensure projects can be constructed within 12 months, a list of potential projects needs to be compiled at the project's immediate start. The stakeholders in the watershed, including resident groups, municipalities, sewer districts, counties, and others, will be tasked with providing a list of problem areas in immediate need of either traditional stormwater runoff control or a minor sewer system infrastructure BMP which can be implemented. The WPC and TC will lead meetings with these stakeholders to discuss the problem areas and determine if a cost-effective solution that fits the funding requirements can be implemented. In addition to in-person or virtual meetings, site visits will be performed by the WPC and TC to document the conditions of the site and locate potential areas for BMP implementation. The TC and Heneghan & Associates/MHE, HLC's chosen engineering and construction partner, will develop possible cost-effective solutions and estimates on approximate costs to implement those solutions. Heneghan & Associates/MHE is an engineering firm the specializes in designing and constructing stormwater management, sanitary sewer lift station, and water resource development projects. A list of potential project sites will be compiled during the first month of the project and

throughout the first year, and possible solutions for those sites will be completed immediately following.

Developing Criteria to Select Sites

The stakeholders' list of potential sites will likely be more than the funding available to this project. To ethically and impartially select the projects to improve those sites, project ranking criteria will be developed by the WPC and TC. This ranking system provides a fair and justifiable means of selecting projects to ensure funds are used on projects providing the most benefits. Examples of ranking criteria that could be suitable for this watershed include: addressing a resident-identified problem area, addressing life-safety or human health concerns, reducing nonpoint source pollution, reducing or eliminating flooding events, reducing sewer system infiltration, cost effectiveness and ease of construction, historical project documentation, and entities who can operate and maintain the BMP. The project ranking criteria will be developed during the first month of the project.

Project Selection and Site Owner Communication

After the list of projects and solutions is compiled and the WPC and TC approve the project ranking criteria, each project will be analyzed using the criteria. The list of projects will be organized by highest to lowest ranking values. This list, along with explanations for the rankings, will be provided to stakeholders to ensure transparency. The TC and Heneghan & Associates/MHE will then begin discussions with the highest-ranked property landowners to let them know they have been selected for BMP implementation and to start working on a landowner agreement. The project selection process will be completed in the first quarter of the project, with site owner communication to follow immediately.

Surveys, Designs, Operation & Maintenance Plan and Landowner Agreement

With the BMP implementation project list finalized and the landowners approval for proceeding with the project, Heneghan & Associates/MHE will begin compiling all required data to complete a professional engineer approved design. For the traditional stormwater runoff control (TSWR) projects, this will include but is not limited to elevation data, site surveys, and flow models, and for minor sewer system infrastructure (MSSI), this includes system maps. After the data is compiled, designs will be completed that meet the requirements of at least one of the following for TSWR projects: 1) the current Natural Resources Conservation Service (NRCS) Technical Guide and Engineering Field Manual, 2) the Illinois Urban Manual and/or 3) the Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois. For the MSSI projects, designs will meet all requirements set by the local sewer districts and the State of Illinois guidelines. Included in the designs will be estimated costs to complete the construction and/or maintenance of BMPs, maps of sites, all plans and specifications, a description of installation and construction techniques and materials to be used.

Operation and Maintenance Plans (O&M) will be developed to ensure long-term viability (no less than ten years) for each of the BMPs implemented. The O&M will identify inspection needs and management activities, such as sediment and debris removal, replacement of vegetation, and critical equipment maintenance. It will also identify both coordinating (i.e., local governments) and participating (i.e., citizen groups, landowners) parties to carry out inspection and management needs and financial resources necessary for the implementation of the O&M Plans.

After completing the design and cost estimate and confirmation of landowner interest in the project, a landowner agreement will be created. The landowner agreement is a legal document created by HLC that binds HLC and the recipient (landowner) to the terms and conditions required by the Illinois EPA grant agreement. The language of the landowner agreement must be approved by the Illinois EPA before submitting to any recipient. The landowner agreement references the project design, O&M plan, BMP documentation form, and all required local, state, and federal permits. The surveys, designs, O&M plans, landowner agreements will be completed in the second quarter of the project. The landowner agreement may also include additional partner responsibilities for O&M.

Illinois EPA Project Approval

The surveys, designs, O&M plans, and landowner agreements will comprise the BMP design package. This design package will be submitted to the Illinois EPA for review and approval. Upon Illinois EPA's request, any or all of these documents will be re-submitted with all requested modifications by HLC to Illinois EPA for final review and approval. After approval, HLC and the landowner will sign the landowner agreement. Construction of BMPs is not allowed to begin without Illinois EPA's approval of the package. Approval of the design package will be requested during the second and third quarters of the project.

Implementation

With Illinois EPA's approval of the design package, implementation can begin on the BMPs. Implementation will be monitored by a qualified professional to ensure the practices are implemented as designed and within budget. The agreed cost of implementation established in the landowner agreement is a firm price and cannot be altered without the final approval from HLC and Illinois EPA. All modifications must be approved by HLC and Illinois EPA prior to continued implementation. Documentation including photos and field notes will be required throughout the implementation process.

Upon completion of implementation, a final implementation check-out to confirm the practice was installed as designed will be completed. If designed appropriately, all documentation including alterations, changes in cost, invoices, and supporting photographic documentation will be submitted to Illinois EPA for approval.

A project sign will be designed by HLC to acknowledge the participating partners and the funding source of the project. HLC will erect the signs prior to the implementation of BMPs and will remain for a mutually agreed upon time after completion of implementation. A draft sign will be submitted to the Illinois EPA during the first quarter of the project and a final sign will be completed immediately following any comments from the agency.

Implementation of BMPs will begin the second quarter of the project and continue through the first year. The majority of implementation will be completed within the first 12 months.

4.2 Who will be involved, including their role(s) and responsibility(s), and what process will be used to identify the most appropriate BMPs, including potential landowners/sites, and funds to implement Operation and Maintenance (O&M) after the grant is complete?

Discussion of process and roles in determining the most appropriate BMPs is discussed in 4.1 above.

Funding long-term operations and maintenance of installed BMPs should come from a dedicated fund in each community or sewer district or are the responsibility of the land owners. However, this may pose a financial challenge for most communities in the watershed. During the watershed planning process, options for long-term maintenance funding will be explored, such as a stormwater trust fund held by a regional entity and shared service models between partners and government agencies.

HeartLands Conservancy will continue to monitor installed practices for the required time period. HLC can also provide local training and input from local citizen groups to monitor the operations and maintenance of installed practices long-term.

4.3 Who will be involved in the long-term operation and maintenance of the BMPs and their role(s) and responsibility(s)

Long-term operation and maintenance of the BMPs will lie with various entities, depending on the location and purpose. In most cases, the property owner (whether public or private) will be responsible for long term operation and maintenance. In some instances, it may be beneficial for another entity to partner or be responsible for long-term O&M due to landowner resource constraints. Examples of other entities include St. Clair County, Metro East Sanitary District, Sewer/Water District, Port Authority, Flood Control District, Bi-State Development, Council of Government, Townships, or a Park District. HeartLands Conservancy will monitor the installed BMPs for a ten-year period to ensure O&M requirements are being met.

However, recognizing that the project area has limited financial and staff resources for long-term maintenance of best management practices, a collaborative or shared-resource model could be developed. This element will be explored during the watershed planning process.

4.4 What is the most important issue to address when identifying potential Prairie du Pont Watershed BMPs for implementation? (Optional Question)

The most important issue is the combination of sustained flooding and wastewater backups, which have significant impacts on residents' health and financial vitality.

Section 5 – Project Match

5.1 Identify the match source(s) for this project and the amount(s) and date(s) that the match would become available.

A –

Match Source	Project Component	Type	Amount	Date Availability
SIUE	Plan	In-Kind	\$11,611	Immediately
NGRREC	Plan	In-Kind	\$25,000	Immediately
Volunteers (e.g. Municipal staff, water depth monitoring)	Plan	In-Kind	\$8,160	Immediately
Heartlands Conservancy	Plan	In-Kind	\$2,000	Immediately
TOTAL PLAN AND COORDINATION MATCH			\$46,771	
St. Clair County	BMPs	Cash	\$25,000	By 12-2021
Landowner/Other Cash Sources	BMPs	Cash	\$10,000	By 12-2021
Heartlands Conservancy	BMPs	In-Kind	\$17,758.40	Immediately
TOTAL BMP IMPLEMENTATION MATCH			\$52,758.40	
TOTAL MATCH AVAILABLE			\$99,529.40	

Section 6 – Applicant History

6.1 How does the Prairie du Pont Watershed project relate to the Applicant's mission and history?

Heartlands Conservancy's mission is to conserve, connect, and restore the diverse natural and cultural resources that sustain southwestern Illinois communities. Our main priorities are Community Resiliency, Land and Water Conservation, and Engagement and Education. For decades, Heartlands Conservancy has been working on efforts to support clean water and reduce the impacts of flooding in southwestern Illinois communities. As a non-profit land conservancy/trust, the organization also seeks to enhance natural resources and green infrastructure as cost-effective stormwater management tools. To date, Heartlands Conservancy has completed seven watershed plans in southwestern Illinois and has one in progress. These plans enable communities to leverage funding, identify priorities, and work together to make improvements. The Prairie du Pont/Judy's Branch watershed project is in complete alignment with the organization's mission and goals for a resilient region.

6.2 Has the applicant ever received grant funding from the Illinois EPA? If yes, provide the grant program name, project title, and year that the project was completed.

YES:

- Canteen-Cahokia Creek BMP Implementation, 319(h), completion expected 2022
- Highland Silver Lake BMP Implementation, 319(h) Watershed Implementation Grant, completion expected 2021

- Wood River and Piasa Creek Watershed-Based Plans, 604(b) Water Quality Management Planning Grant, completed 2020
- Lower Silver Creek Watershed-Based Plan, 604(b) Water Quality Management Planning Grant, completed 2018
- Upper Silver Creek BMP Implementation, 319(h) Watershed Implementation Grant, completed 2018
- Kaskaskia River Basin Feasibility Study Fiscal Agent, 319(h) & 604(b) grants, completed in 2017
- Upper Silver Creek Watershed-Based Plan, 604(b) Water Quality Management Planning Grant, completed 2015
- Alton Municipal (Wadlow) Golf Course Riparian Zone Restoration, Illinois Green Infrastructure Grant, completed 2013
- Cahokia Creek Restoration at Roxana Landfill, 319(h) Watershed Implementation Grant, completed 2013
- American Bottom Wetland Interpretive Site and Educational Campaign, 319(h) Watershed Implementation Grant, completed 2013
- Clinton County Livestock Nutrient Management Project (several phases/funding years), 319(h) Watershed Implementation Grants, completed 2012 & 2015
- Low Impact Development Techniques in Madison County, Illinois, 319(h) Watershed Implementation Grant, completed 2010
- Lake Branch WRAS Implementation, 319(h) Watershed Implementation Grant, completed 2005

6.3 Identify staff, their qualifications and the experience that they have will allow the applicant to manage and successfully implement the Prairie du Pont Watershed project.

Tyler Burk, EIT, Project Manager, HeartLands Conservancy

Role: Project manager/coordinator and plan development/ACPF modeling

Qualifications/Experience: Bachelor of Science in Civil Engineering from University of Missouri - Columbia and Master of Science in Environmental Science from Southern Illinois University Edwardsville. Has been the Project Manager for two Illinois EPA 319(h) BMP Implementation Grant Projects: Highland Silver Lake and Canteen Creek - Cahokia Creek. He also has written two Illinois EPA approved watershed-based plans, Wood River and Piasa Creek, and is currently completing two more plans. Trained in stream assessment and monitoring through Midwest Streams and completed the Purdue University Watershed Leadership Academy.

Other project team members:

Dr. Rohan Benjankar (PI), Assistant Professor, SIU Edwardsville Civil Engineering Department

Role: Watershed Model development and analysis

Qualifications/Experience: Assistant Professor in the Department of Civil & Environmental Engineering at Southern Illinois University, Edwardsville. He completed his Ph.D. from University of Idaho (2011), M.S. from University of Stuttgart (2003), Germany and B.E. from Tribhuvan University (1998), Nepal in Civil Engineering. Dr. Benjankar has postdoctoral experience from 2009-2015. His research projects have been focused on integrated watershed hydrology, river hydraulics and habitat modeling (aquatic and riparian vegetation), fluvial geomorphology, sediment transport, stream

water quality, stormwater management and urban flood hazard. Dr. Benjankar's experiences are mainly focused on water resources engineering and management and watershed hydrology, with particular emphasis on river floodplain physical habitat, aquatic and riparian ecosystem and river restoration. The PI's expertise should be helpful to develop watershed and river hydraulic modeling to manage aquatic and riparian ecosystems and flood hazards in an urban setting.

Dr. John Sloan, Soil and Watershed Scientist, National Great Rivers Research and Education Center

Role: Water quality monitoring/data collection and STEPL modeling

Qualifications/Experience: Dr. John Sloan is the Soil and Watershed Scientist at the National Great Rivers Research and Education Center (NGRREC) in East Alton, Illinois where he is part of a research group dealing with water resource issues in the Mississippi River Basin. His research focuses on strategies for monitoring and reducing the flow of nutrients and sediments from the landscape into the rivers, streams and lakes of the Mississippi River basin. He uses a variety of monitoring techniques ranging from discrete sampling in small streams to boat surveys of large reservoirs and real-time continuous monitoring through the Great Rivers Ecological Observatory Network (GREON). He created and manages the Environmental Chemistry Laboratory at NGRREC which conducts nutrient analysis of water, sediments, soils, and plants.

Katie Siech, Environmental Programs Associate, Heartlands Conservancy

Role: Plan development, outreach/education, and SUSTAIN modeling

Qualifications/Experience: Bachelor of Science in Biology and Master of Science in Environmental Science from SIU-Edwardsville. Katie has been involved with three of Heartlands Conservancy's watershed planning processes in southwestern Illinois, including modeling, plan development, and research. Katie has extensive experience in watershed outreach and education in her prior work with St. Louis Community College, Open Space Council of Greater St. Louis, and Missouri Department of Conservation.

Mary Vandevord, AICP, LEED AP-ND, President & CEO, Heartlands Conservancy

Role: Community engagement and planning/outreach oversight

Qualifications/Experience: 15 years of experience in urban and regional planning, watershed planning, and community engagement. Masters Degree in Regional and City Planning from University of Oklahoma. Trained public engagement facilitator. Credentialed by American Institute of Certified Planners and LEED-Accredited for Neighborhood Development. Has provided oversight for all seven of Heartlands Conservancy's watershed-based plans, as well as oversight, planning expertise, and community engagement work on hundreds of community planning projects in the region and throughout the country.

Laura Lyon, A. AIA, APA, CNU, Director of Strategic Initiatives, Heartlands Conservancy

Role: Community engagement and outreach and education

Qualifications/Experience: 20 years of experience in urban and regional planning, open space planning, and community planning and engagement. Masters Degree in Architecture from Washington University in St. Louis, MO. Undergraduate in Fine Art

from the University of Florida in Graphic Design supports over 30 years of graphic communication and outreach campaigns for public, private, nonprofit, and community initiatives of all scales. Has specifically provided graphic communications for the region and HeartLands Conservancy's plans, including stormwater, green infrastructure and watershed plans since 2000, including 9 years as staff. Has provided research, exhibits, cultural resource planning, strategic planning expertise, and community engagement leadership on planning projects throughout the region and throughout the Midwest, particularly within the Mississippi River Basin. Many of her projects have been awarded by the APA, AIA, ASLA, and CNU, at the local, state, and national levels.

Shelli Bement, Director of Finance & Administration, HeartLands Conservancy

Role: financial management of the project for reporting and billing/payments. (Does not bill time to the project)

Qualifications/Experience: Accountant with more than 20 years of experience. Has been involved in financial oversight of several IEPA grants awarded to HeartLands Conservancy.

Curt Westrich, PE, Senior Engineer, Heneghan & Associates/MHE

Role: Lead engineer and construction oversight for the implementation of both Traditional Stormwater Runoff and Minor Sewer System Infrastructure BMPs.

Qualifications/Experience: Thirty-six years of experience as a civil engineer specializing in land planning, design of residential and commercial subdivisions and site development projects, roadway design, sanitary sewer improvement projects, water line extension projects, drainage improvements, and hydrologic/hydraulic studies. Perform Master Planning activities, feasibility studies, design, construction administration, and project management for municipalities, counties, developers, contractors, and institutions.

Section 7 – Project Future

7.1 What role do you envision your organization will play in the implementation of the completed Prairie du Pont Watershed-based plan? (Optional Question)

HeartLands Conservancy's mission is invested in supporting the communities of southwestern Illinois. The organization intends to continue working with residents, municipalities, and other organizations in the future toward further implementation of the watershed plan. This could include seeking future implementation funds for construction of best management practices, assisting, or supporting organizations in the watershed with resources, funding sources, or other assistance to repair/replace infrastructure and site drainage issues. HeartLands Conservancy will also continue education and outreach in line with the watershed-based plan and community needs, including providing training on green infrastructure operations and maintenance and other stormwater topics. Our hope is that the Watershed Planning Committee will continue to meet even after the plan is complete. This will ensure that progress can still be made in the watershed with ongoing resident involvement. HeartLands Conservancy will continue to participate in such a committee and offer assistance as needed or requested. Likewise, the water depth monitoring by residents can continue into the future to provide long-term data in the watershed.

Long-term it may be worthwhile to form a stormwater collaborative, similar to the Calumet Stormwater Collaborative in northern IL, to continue addressing the watershed plan priorities, as well as other stormwater, wastewater, and green infrastructure issues and opportunities throughout the region. Such a collaborative could include municipalities, townships, counties, resident groups, NGOs, universities, USEPA, IEPA, IDNR, USACE, park districts, sewer and water districts, etc. HeartLands Conservancy would be interested in helping to facilitate or participate in the formation and work of a stormwater coalition.